

ABSTRACT OF THE DISCLOSURE

2 An optical imager, such as a microscope for performing multiple frequency
3 fluorometric measurements comprising a light source, such as a laser source is
4 disclosed. The system is used to excite a sample into the fluorescent state. Light
5 from the excited sample is collected by a microscope. The microscope utilizes
6 conventional confocal optics optimized to have a very narrow depth of field, thus
7 limiting the information collected to a thin planar region. Measurements are taken
8 over the fluorescence lifetime of the sample simultaneously from the excitation
9 source and from the excited sample. Information is taken in a matrix and
10 comparison of the image matrix and the standard during simultaneous
11 measurements yields output information.